C-1-2

PRELIMINARY SOILS INVESTIGATION
ROSS CREEK REALIGNMENT
SANTA CLARA COUNTY, CALIFORNIA

HALES TESTING LABORATORIES
A. I. HALES & CO. INC.
ENGINEERS – CHEMISTS – METALLURGISTS
4514 HOLLIS STREET
OAKLAND 8, CALIFORNIA

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WATER DISTRICT
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PRESIDENT

FRANK R. KILLINGER
VICE PRESIDENT

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A. J. HALES & CO., INC.
ENGINEERS · CHEMISTS · METALLURGISTS

LABORATORIES
OAKLAND
SACRAMENTO
SAN JOSE

REPLY TO
OLYMPIC 3-7611
4514 HOLLIS STREET
OAKLAND 8, CALIFORNIA

October 17, 1957

SUBJECT: Ross Creek Realignment
Santa Clara County, California

Santa Clara County Flood Control
& Water Conservation District
First and Rosa Streets
San Jose, California

Attention: Mr. George Prime

Gentlemen:

Enclosed, herewith, is our soils engineer's Preliminary Soils Investigation Report for the subject project.

If you require further information please feel free to call on us at any time.

Thank you.

Yours very truly,

HALES TESTING LABORATORIES

By C. E. Maduell

CEMaduell/cb

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5750 ALMADEN EXPRESSWAY
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HALES TESTING LABORATORIES
A. J. HALES & CO. INC.
ENGINEERS CHEMISTS METALLURGISTS

IN ASSOCIATION WITH
1514 HOLLIS STREET
OAKLAND 8, CALIFORNIA
OLYMPIC 3-7611

PORTER, URQUHART, McCREARY
& O'BRIEN
FOUNDATION ENGINEERS

16 October 1957

Santa Clara County Flood Control
& Water Conservation District
First and Rosa Streets
San Jose, California

Subject: Preliminary Soils Investigation
Ross Creek Realignment
Santa Clara County, California
Our Job No. 57-159

Attention: Mr. George Prime

Gentlemen:

A Preliminary Soils Investigation has been performed at the site of the realignment of Ross Creek between Stations 56+00 and 60+00 of the realigned channel in Reach No. 1 in Santa Clara County, California.

The purpose of this investigation was to satisfy the requirements of the F. H. A. for subdivisions containing cuts and fills, as it is anticipated that the adjacent subdivision will be extended to include that area containing the present creek channel. Therefore, fill placed during realignment of the existing channel must meet F. H. A. requirements.

Authorization to proceed with this project was received from Mr. George Prime, Supervising Engineer of the Santa Clara County Flood Control and Water Conservation District.

Field investigation consisted of a visual inspection of the site by a Soils Engineer, who examined the creek channel in order to determine its ability to support the fill and the possible housing construction. This inspection indicated that the material upon which the fill is to be based is a dense brown sandy clay containing a high percentage of gravel with boulders up to 12 inches in diameter. No borings were made due to the gravelly nature of this material. The surface material was a gray to black clayey sand with gravel. This material varies in depth with a maximum depth of approximately 3 feet. Further inspection revealed the fact that the west end of the section of channel to be filled contained loose material and broken concrete rubbish which had been dumped by equipment working in the area. It will be necessary to remove this loose material and rubbish from the channel prior to the placement of any fill.

Samples of the materials to be used for fill were submitted to the laboratory for classification and testing.

This testing included a compaction test performed on each of the proposed fill materials to determine the maximum dry density. These tests were conducted in accordance with the Standard Method of Test for the Compaction and Density of Soils, A. A. S. H. O. Designation T99-49, modified as follows: 5 layers, 25 blows per layer, 10-pound hammer, 18-inch drop. Results of these tests are shown on Plates No. 2 and 3. Samples of the surface material were then compacted to 99 percent of the maximum dry density and a triaxial compression test was performed to determine the shear strength of the compacted fill. Results of this test are shown on Plate No. 4.

Knowledge of the geology of this area and previous experience in the area supplemented by results of the site inspection and laboratory tests, indicate that the materials at this site are acceptable for use as fill. When placed and compacted in accordance with F. H. A. specifications they will be capable of supporting the anticipated construction. It is our opinion that the subgrade is more than adequate for support of the fill; however, it is recommended that prior to the placement of any fill an inspection be made to insure that the channel has been cleared of all rubbish and loose material.

We are enclosing a guide set of recommended specifications for the construction of engineered fills in accordance with F. H. A. Data Sheet 79-C.

Very truly yours,

Porter, Urquhart, McCreary & O'Brien

C. L. Lowry Jr.

C. L. Lowry, Jr.
Registered Civil Engineer No. 9104

CLL/HLW/sl

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NOTE: THIS DRAWING HAS BEEN TAKEN FROM THE SANTA CLARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT PLAN AND PROFILE DRAWING - SHEET NO. 3 - ENGINEER JOB NO. FC-174 DATED 7-24-57

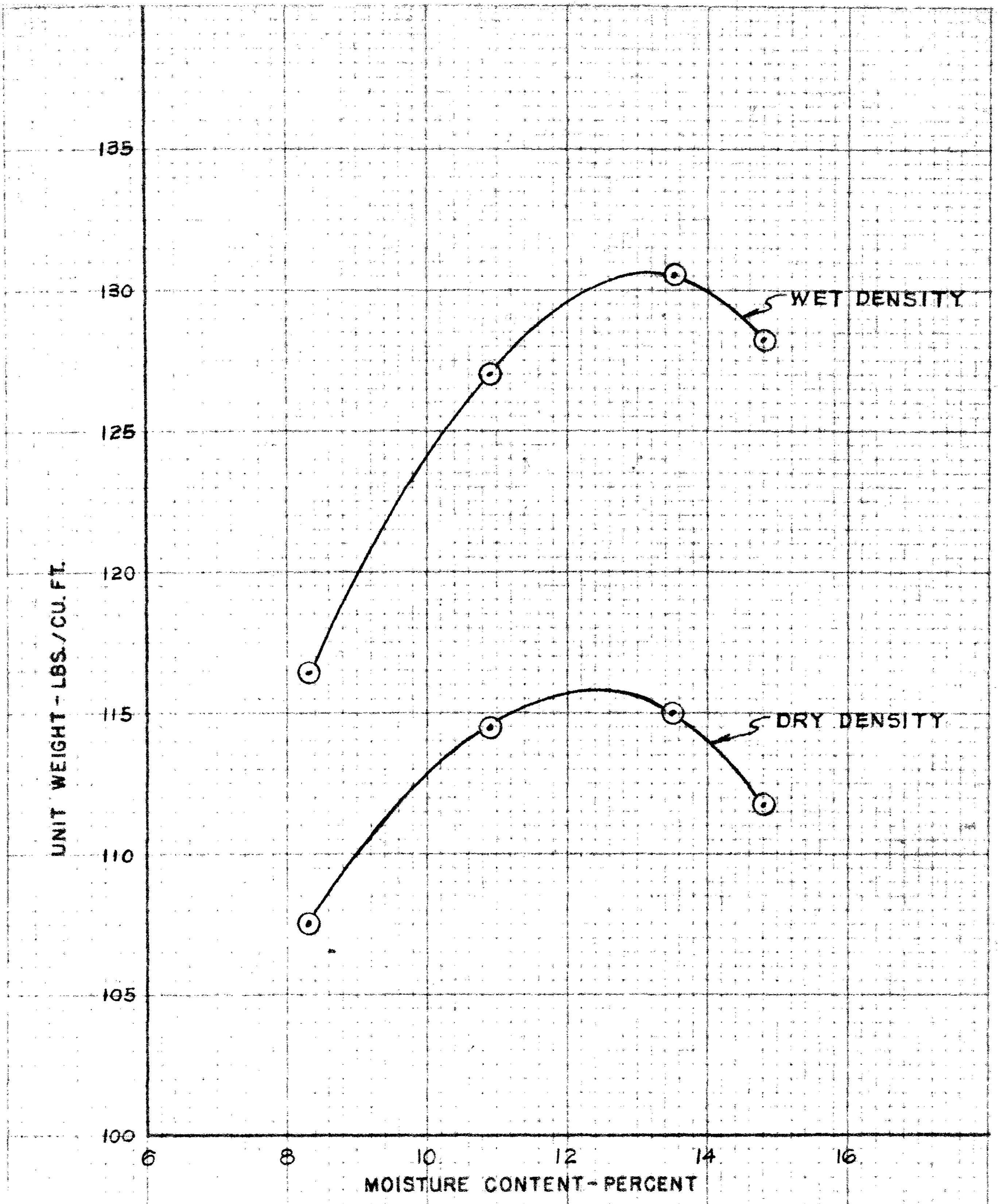
ROSS CREEK REALIGNMENT

SANTA CLARA COUNTY FLOOD CONTROL & WATER CONSERVATION DISTRICT
SANTA CLARA COUNTY - CALIFORNIA

LOCATION PLAN

PORTER, URQUHART, Mc CREARY & O'BRIEN
CONSULTING ENGINEERS

DATE: 10/10/57 PROJECT: 57 - 159
DRAWN BY J.N. CHECKED BY H.W.
APPROVED BY G. L. Lowry Jr.
REG. CIVIL ENGR. NO. 9104
PLATE NO. 1



TEST DATA

MATERIAL: BROWN SANDY CLAY AND GRAVEL

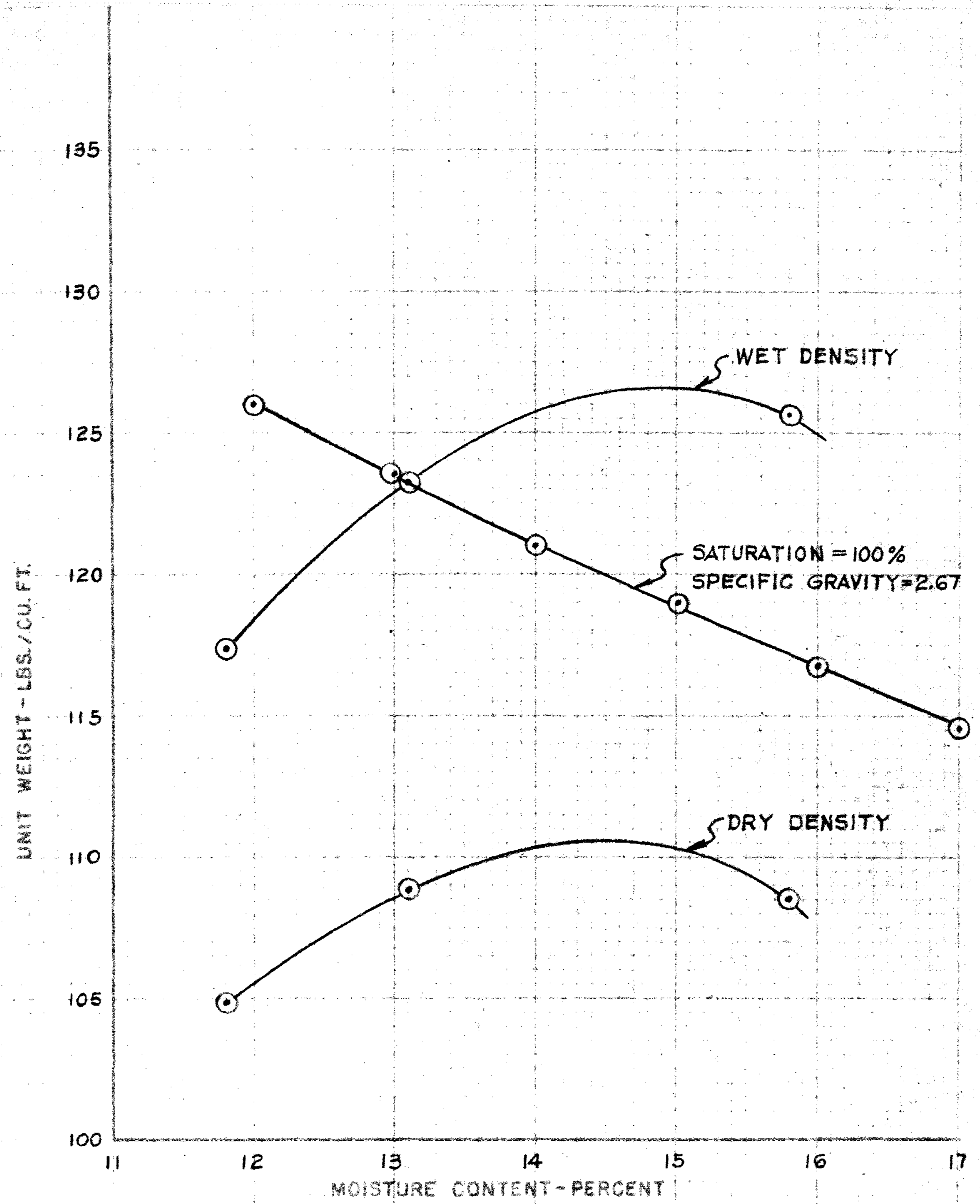
TYPE OF TEST: MODIFIED AASHO T99-49

MAXIMUM DRY DENSITY (LBS./CU. FT.): 115.7

OPTIMUM MOISTURE CONTENT (%): 12.5

ROSS CREEK REALIGNMENT
SANTA CLARA COUNTY, CALIF.
COMPACTION TEST
PORTER, URQUHART, McCREARY & O'BRIEN
CONSULTING ENGINEERS
DATE: 10-8-57 JOB NO.: 57-159

PLATE NO. 2



TEST DATA

MATERIAL: LIGHT GRAY CLAYEY SAND & GRAVEL

TYPE OF TEST: MODIFIED AASHO T99-49

MAXIMUM DRY DENSITY (LBS./CU. FT.): 110.5

OPTIMUM MOISTURE CONTENT (%): 14.5

ROSS CREEK REALIGNMENT
SANTA CLARA COUNTY, CALIF.
COMPACTION TEST
PORTER, URQUHART, McCREARY & O'BRIEN
CONSULTING ENGINEERS
DATE: 10-8-57 JOB NO.: 57-159

PLATE NO. 3

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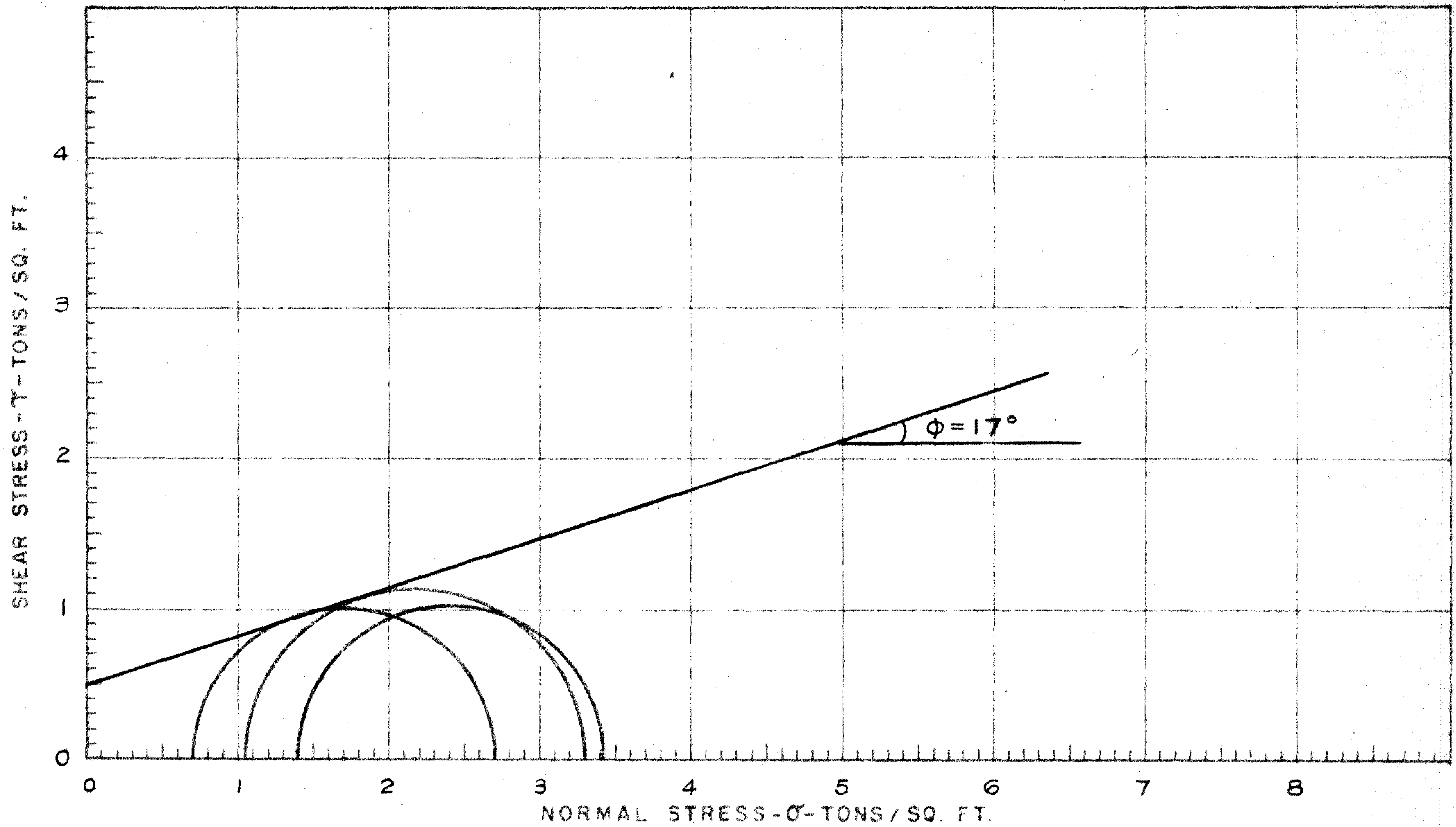

TEST DATA

MATERIAL DESCRIPTION: LIGHT GRAY CLAYEY SAND

SAMPLE CONDITION: COMPACTED TO 99% AASHO T99-49

TYPE OF TEST: QUICK-DRAINED

DRY DENSITY (LBS / CU. FT.): 109

NATURAL MOISTURE CONTENT (%).

TEST MOISTURE CONTENT (%): 16.5

DEGREE OF SATURATION (%): 88

ROSS CREEK REALIGNMENT
SANTA CLARA COUNTY, CALIF.

TRIAXIAL COMPRESSION TEST

PORTER, URQUHART, McCREARY & O'BRIEN
CONSULTING ENGINEERS

DATE: 10-8-57 JOB NO: 37-159

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OCT 18 1957
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